<u>Remarks</u>

Claims 1-25 are pending.

The Examiner made the present Office Action final, even though the Examiner introduced a new ground of rejection by rejecting Claims 1-21 and 23-25 under 35 U.S.C. § 102(b) as being anticipated by "On the Design of a High-Performance ATM Bridge" by Wen-Tsuen Chen et al. ("Chen"). The Examiner attempts to justify the finality of the Office Action by stating that "Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action." However, in the present Office Action, the Examiner maintained each and every one of his rejections raised in the previous Office Action of July 30, 2004, including the "double patenting" rejections, without reference to the amendments to these claims. By maintaining these previous rejections based on the very grounds raised in the previous obvious action, the Examiner must believe that the scopes of Applicant's claims were not changed by Applicant's amendments. Accordingly, the Examiner could have rejected these claims at the time of the previous Office Action, and therefore the new ground of rejection was not necessitated by the Applicant's amendment. Therefore, Applicant respectfully submits that the finality of the present Office Action is improper and premature, and therefore requests that the Examiner withdraw the finality of the present Office Action.

With respect to the merits of the Examiner's anticipation rejection over Chen, the Examiner states:

> **8.1** As regards independent **Claims 1 and 19** the *Wen-Tsuen et al.* reference discloses emulation of a bridge **(Abstract)** and bit-rate **(page 210).**
>
> **8.2** As regards dependent **Claims 2-18, 20, 21 and 23-25** see **(pages 207-213).**

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Applicant respectfully traverses the Examiner's rejection. Contrary to the Examiner's

assertion, the Chen's Abstract does not disclose "emulation of a bridge":

> This paper presents the design and implementation of a high-performance ATM bridge. The proposed ATM bridge can be used to interconnect IEEE 802.3/Ethernet, IEEE 802.3u/Fast Ethernet, and 802.11/Wireless LANs. Data traffic is filtered out or forwarded to other homogeneous LANs by a proprietary LAN emulation technology (LANE) specification. Enhanced capability including the support for emulated Fast Ethernet and Wireless LANs are provided by the proposed ATM bridge. A QoS guaranteed traffic scheduling algorithm is also proposed for the Wireless LANs.

(Chen's Abstract in its entirety).

Rather, Chen's Abstract teaches using a bridge to allow one network to emulate

another network. Specifically, Chen's Abstract teaches that the ATM network (i.e., the

network operating with the higher bit-rate), may be used to emulate 802.3, 802.3u and 802.11

networks, which are network operating at lower bit-rates. Therefore, if one is to construe

Chen's ATM network as an emulated electronic device, as the Examiner's rejection requires,

the emulated electronic device operates at a higher bit-rate than the network it emulates,

which is contrary to limitations of Claims 1 and 19, which recite:

> 1. A method for <u>connecting an emulated electronic device to a network operating at a specified bit-rate higher than the emulated electronic device</u>, the method comprising:
>
> providing a computer having a network interface, an emulation interface and a memory, the network interface being capable of communicating with the network at the specified bit-rate;
>
> connecting the computer through the network interface with the network and through the emulation interface with the emulated electronic device; and
>
> executing in the computer a network handling program in the computer which performs:
>
> (a) receiving data packets from the network

through ~~a~~ the network interface;

(b) storing the data packets received from the network in a first buffer in the memory;

(c) transmitting the data packets in the first buffer to the emulated electronic device through ~~an~~ the emulation interface;

(d) receiving data packets from the emulated electronic device through the emulation interface; and

(e) transmitting the data packets received from the emulated electronic device to the network through the network interface.

19.   An apparatus for <u>connecting an emulated electronic device to a network running at a specified bit-rate higher than the emulated electronic device</u>, the apparatus comprising:

a computer having a memory, a network interface capable of operating at the specified bit-rate for connecting the computer to the network and an emulation interface for connecting the computer to the emulated electronic device; and

computer instruction executable by the computer for:

creating a first buffer in the memory;

receiving data packets from the network through the network interface;

storing data packets received from the network in the first buffer;

transmitting the data packets in the first buffer to the emulated electronic device through the emulation interface;

receiving the data packets from the emulated electronic device through the emulation interface; and

transmitting the data packets received from the emulated electronic device to the network through the network interface.

(emphasis added)

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Thus, Applicant respectfully submits that Chen neither discloses nor suggests either of

Applicant's Claims 1 and 19. As Claims 2-18, 20-21, and 23-25 each depend from either

Claim 1 or Claim 19, Claims 2-18, 20-21 and 23-25 are similarly each allowable over Chen.

Reconsideration and allowance of Claims 1-21 and 23-25 are therefore requested.

The Examiner rejected Claims 1, 17-19 and 22 provisionally under the judicially

created doctrine of double patenting over Claim 1 of each of three copending patent

applications (10/158,648, 10/158,772, and 10/044,217). When the Examiner indicates

allowable subject matter in this application and the co-pending patent application, Applicant

will file an appropriate terminal disclaimer to overcome the Examiner's rejection.

The Examiner rejected Claims 1, 19 and 21 under 35 U.S.C. § 103(a) as being

unpatentable over U.S. Patent 5,911,059 ("Profit"), in view of U.S. Patent 6,067,585

("Hoang") and further in view of U.S. Patent 5,280,481 ("Chang"). With respect to Claims 1

and 19, the Examiner states:

> **4.1** As regards independent **Claims I and 19** and dependent **Claim 21** the *Profit Jr.* reference discloses emulation of an electronic device **(Figure 5 and Col. 3 Lines 65-67 Col. 4 Lines 1-41)** and receiving network data packets, transmitting network data packets and receiving and transmitting data packets to and from the emulated electronic device **(Figures 6 & 7, item 102, Col. 7 Lines 14-48).** As regards the limitation of a specified bit-rate, that limitation is inherent to the an electronic device emulating a bridge.
>
> However, the *Profit Jr.* reference does not expressly disclose a network operating at a speed higher than the emulated device.
>
> The *Profit Jr.* reference discloses that there is a speed/performance problem with hardware simulators in regards to the speed at which these simulations operate **(Col. 2 Lines 36-55)**. Thus, an artisan of ordinary skill would have been motivated to search the related art to find a way to attach an emulated network device to a network in such a manner so as to allow the emulated device to perform the emulation and not be overwhelmed by the arrival and transmission of network frames that arriving at a speed

greater than the emulation system can support. In the network interface controller art the *Hoang* reference discloses a method of controlling the rate at which network frames travel across different network segments and/or devices and therefore provides a way for a network to operate at a speed higher than the emulated device **(Col. 2 Lines 18-56).**

Thus, it would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to have combined the methods of the *Profit Jr.* reference with the methods of the *Hoang* reference because, the idea of emulating a Local Area Network transmission is well known in the art **(Chang et al. Col. 3 Lines 53-65, Col. 4 Lines 13-26),** and an artisan of ordinary skill would have known to slow down the stream of data packets from the network going into the electronic device emulation because of the speed performance problems of emulators as disclosed in the *Profit Jr.* reference **(Profit Jr. Col. 2 Lines 36-55).**

Applicant respectfully traverses the Examiner's rejection. First, at Hoang's col. 2, lines 18-56, on which the Examiner relies for his rejection, Hoang teaches using a 2-port bridge to handle network traffic:

... A current approach to attaining this objective is to use a 2-port bridge device capable of filtering data packets between different network segments or domains by making simple forward/don't forward decisions on each data packet it receives from any of the segments to which it is connected...(Hoang's col. 2, lines 22-27)

However, contrary to this approach, at Chang's col. 3, lines 53-65, on which the Examiner also relies for his rejection, Chang teaches against using a bridge, and advocates using ISDN as a LAN transmission media:

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... The disclosed invention presents the ISDN as a LAN transmission media to upper layer (layer 3 and above) protocols, and permits communication systems designed to operate over LAN to operate over ISDN. As a result, LAN devices can be dispersed geographically <u>using inexpensive ISDN communications with geographic limitations of a single LAN and without the cost of bridges, routers and the associated communication links currently used to interconnect LAN</u>

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segments. (emphasis added; Chang, at col. 3, lines 57-66)

Thus, Applicant respectfully submits that the Examiner's combination of teachings in his rejection is improper, because the teachings the Examiner relied upon teach against each other. Accordingly, Applicant respectfully submits that Claims 1 and 19 are not rendered obvious by the references cited by the Examiner, as one skilled in the art would not combine contradictory teachings. Further, if one were to follow the teachings of Hoang and Chang, depending on whether one arbitrarily gives greater weight to Hoang's teaching of a 2-port bridge, which selectively forward or don't forward packets, or to Chang's ISDN communication media without bridges, one would arrive at a system using either a 2-port bridge or an ISDN communication medium. Neither of these results discloses or suggests the limitations of Applicant's claims. Applicant's Claims 1 and 19 each recite specific steps, executed by a computer connected between the network and the emulated device, which are neither disclosed nor suggested by the cited portions of the prior art references relied upon by the Examiner:

> 1.   A method for connecting an emulated electronic device to a network operating at a specified bit-rate higher than the emulated electronic device, the method comprising:
>
> providing a computer having a network interface, an emulation interface and a memory, the network interface being capable of communicating with the network at the specified bit-rate;
>
> connecting the computer through the network interface with the network and through the emulation interface with the emulated electronic device; and
>
> executing in the computer a network handling program in the computer which performs:
>
> (a) receiving data packets from the network through a the network interface;
>
> (b) storing the data packets received from the network in a first buffer in the memory;

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(c) transmitting the data packets in the first buffer to the emulated electronic device through ~~an~~ the emulation interface;

(d) receiving data packets from the emulated electronic device through the emulation interface; and

(e) transmitting the data packets received from the emulated electronic device to the network through the network interface.

19.   An apparatus for connecting an emulated electronic device to a network running at a specified bit-rate higher than the emulated electronic device, the apparatus comprising:

a computer having a memory, a network interface capable of operating at the specified bit-rate for connecting the computer to the network and an emulation interface for connecting the computer to the emulated electronic device; and

computer instruction executable by the computer for:

creating a first buffer in the memory;

receiving data packets from the network through the network interface;

storing data packets received from the network in the first buffer;

transmitting the data packets in the first buffer to the emulated electronic device through the emulation interface;

receiving the data packets from the emulated electronic device through the emulation interface; and

transmitting the data packets received from the emulated electronic device to the network through the network interface.

(emphasis added)

Thus, Claims 1 and 19 are allowable over the conflicting teachings of Profit, Hoang and Chang, considered individually or in any combination. Applicant therefore requests

reconsideration and allowance of Claims 1, 19 and 21.

The Examiner rejected Claims 2-7, 11-16 and 23-24 under 35 U.S.C. § 103(a) as being unpatentable over Profit, in view of Hoang, in further view of Chang, and in further

view of U.S. Patent 6,061,767 ("Kuo"). The Examiner cites Kuo for teaching "Media Access Controller Buffer Management" at Figures 1A and 1B, col. 1, lines 14-51, col. 2, lines 16-35 and Col. 4, lines 1-7. In this rejection, the Examiner conveniently ignores Kuo's specific teaching against one kind of memory buffer (i.e., the FIFO buffer), at col. 1, lines 30-51. Nevertheless, because Claim 1 distinguishes over Profit, Hoang and Chang for the reasons stated above, and because Kuo's Media Access Controller Buffer Management teachings do not cure the deficiencies of Profit, Hoang and Chang, their combined teachings neither disclose nor suggest Claims 2-7, 11-16 and 23-24, each of which depending from Claim 1. Accordingly, Applicant respectfully requests reconsideration and allowance of Claims 2-7, 11-16 and 23-24.

The Examiner rejected Claims 8-10 under 35 U.S.C. § 103(a) as being unpatentable over Profit, in view of Hoang, in further view of Chang, in further view of Kuo and in further view of U.S. Patent 5,383,919 ("Schwaller"). The Examiner cites Schwaller for teaching "recording performance measurements of network frames." Because Claims 1 and 7 each distinguish over Profit, Hoang, Chang and Kuo for the reasons stated above, and because Schwaller's network performance measurement teachings do not cure the deficiencies of Profit, Hoang, Chang and Kuo, their combined teachings neither disclose nor suggest Claims 8-10, each of which depending from either claim 1 or Claim 7. Accordingly, Applicant respectfully requests reconsideration and allowance of Claims 8-10.

The Examiner rejected Claim 21 under 35 U.S.C. § 103(a) as being unpatentable over Profit, in view of Hoang, in further view of Chang, in further view of U.S. Patent 6,128,673 ("Aronson"). The Examiner cites Aronson for teaching "a parallel port card." Because Claim 1 distinguishes over Profit, Hoang, and Chang for the reasons stated above, and because Aronson's parallel port card teachings do not cure the deficiencies of Profit, Hoang, and

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Chang, their combined teachings neither disclose nor suggest Claim 21, which depends from Claim 1. Accordingly, Applicant respectfully requests reconsideration and allowance of Claims 21.

Therefore, for the reasons set forth above, all pending claims (i.e., Claims 1-21, and 23-25) are allowable over the art of record. If the Examiner has any question regarding the above, the Examiner is respectfully requested to telephone the undersigned Attorney for Applicant at 408-392-9250.
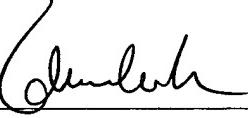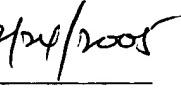
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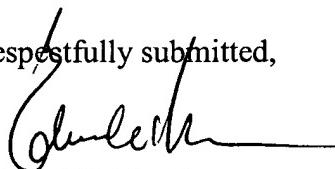
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